

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of
BOUTENKO ET AL.

: METHOD AND SYSTEM FOR CONTROL
OF EXPOSURE IN RADIOLOGICAL
IMAGING SYSTEMS

Application No. 09/516,122
Filed: 03/01/2000

: Art Unit: 2882
: Examiner: Porta, David P.
: Confirmation No.

Date: June 22, 2006

INFORMATION DISCLOSURE STATEMENT – CONCISE
EXPLANATION OF EACH NON-ENGLISH DOCUMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

The following is submitted in the above application in compliance with 37 CFR 1.97 and 37 CFR 1.98: a concise explanation of the non-English document(s) cited in the PTO-1449 or Substitute and any Search Report or communication from a non-US patent office or an International Search Report from an International Searching Authority for a patent application filed via the Patent Cooperation Treaty or document (s) cited in the application or the priority application. The concise explanation is based on an English language abstract available from publicly accessible databases of patents and non-patent documents or a translation, even if only partial, of the cited non-English documents. The concise explanation is not based on a review of a full text translation of the cited document and/or based on an abstract as published in a patent database and/or a translation of the text cited in the Search Report.

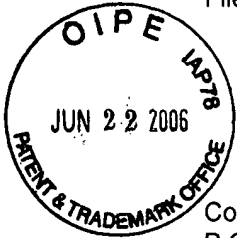
| <u>Document</u> | <u>Concise Explanation</u> |
|-----------------|---|
| DE 196 24 094 | An X-ray imaging apparatus has a matrix detector (5) that is arranged behind a support (4) for an object (3) to be imaged. The magnification ratio is adjustable by varying the focus-detector distance (FDA) and the focus-object distance (FOA). The primary beam aperture (10) is also adjusted to adjust the X-ray beam (2) from the X-ray emitter (1). The X-ray emitter (1) emits a conical or pyramid shaped X-ray beam that is attenuated the aperture (10). The beam (2) passes through the object. The matrix detector (5) has detector elements for providing image generation. The detector signals are fed to a correction unit (7) that feeds digital images to a monitor (11). The apparatus is controlled by a control unit (9) |

CERTIFICATE OF MAILING OR TRANSMISSION

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Date: June 22, 2006



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- JP H05-335094 Prevention of an increase in exposure does to a subject and provide a stable fluoroscopic image. A tube voltage control circuit (6) feeds back x-ray output transmitted through the subject, and applies control voltage V_v to a high voltage generation circuit, thereby controlling FKV. This control voltage V_v and another voltage corresponding to SID are inputted to a tube current control circuit (8), and the tube current control voltage V_a basically proportional to the voltage V_v but so limited as to correspond to SID is obtained. This voltage V_a is, then, sent to a filament heating circuit (9) for controlling F_{ma} .
- JP H02-034159 Irradiating a shock wave concentration to a predetermined are by using a 3D ultrasonic imaging technique for a reference device. By moving ultrasonic transducers (48, 56) images of transducers are transferred to an ultrasonic image forming device (94) and an image monitor (72) through transducer switch (86). Information from the device (94) and a videotizer (100) are transmitted to a main computer (78), and a focus position of an ellipsoidal reflector (14) is focused to a calculus (18) by a step motor control circuit (124) and motors (126, 128, 130). When energy generator 132 is completely charged and becomes possible to begin the spark discharge, a starting switch of a spark discharge control unit (118) is activated to generate a spark discharge at an interval of a spark interval discharge unit (16).
- JP S60-160599 Images of high quality are obtained by correcting changes in the quantity of X-rays reaching the surface of a film, that are caused by the distance changing with the movement of the irradiating device, by means of changing the number of pulses or the pulse width of the pulsed irradiation. A signal, that is proportional to the square of the distance between an X-ray tube (1) and a detection device (2), is inputted to a pulse-number setting circuit (6). The pulse-number setting circuit, including an A/D conversion circuit, generates a numerical output in inverse proportion to the input signal as the pulse-number setting output. A standard clock signal generating circuit (18) outputs the clock signal, that is counted by a counter contained in an irradiation signal generating circuit (17), and each time it reaches the numerical value of the pulse-number setting output given by the circuit (16), an irradiation signal with a certain width is generated. Therefore, the irradiation intervals change in inverse proportion to the square of the distance between the X-ray tube and the film, and the quantity of X-rays reaching the film surface is maintained at a constant level.

Appln No. 09/516,122
Amdt. Dated: 06/22/2006
Reply to Office Communication of: 02/27/2003
Docket No. 14XZ00060/GEM-0276

Application No. 09/516,122
Docket No. 14XZ00060/GEM-0276

JP -UM-H06-038398 In an X-ray apparatus the tube electric current exposure time product mAs is automatically reset and measurement of SID is large or small or temporary. The mAs, X-ray tube focus and the distance SID (between films) and a presetting storage are arranged to image thickness of an object and to store this data. An ultrasonic range finder measures the distance between the X-ray tube and the front face of the subject and calculates actual SID and actuates an audio sound when the measurement varies from a reference. A CPU resets the distance before energizing of the tube.

Respectfully submitted,

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By 

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Appln No. 09/516,122
Amdt. Dated 06/22/2006
Reply to Office Communication of 02/27/2003
Docket No. 14XZ00060/GEM-0276

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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|---------------|----------------------|-------------------------------|--|
| Applicant No. | : 09/516,122 | Confirmation No. | |
| Applicant | : BOUNTENKO ET AL. | METHOD AND SYSTEM FOR CONTROL | |
| Filed | : 03/01/2000 | OF EXPOSURE IN RADIOLOGICAL | |
| TC/A.U. | : 2882 | IMAGING SYSTEMS | |
| Examiner | : Porta, David P. | | |
| Docket No. | : 14XZ00060/GEM-0276 | | |

June 22, 2006

INFORMATION DISCLOSURE STATEMENT

- ☐ 1. Pursuant to 37CFR 1.97(b) [within three months of national, non-CPA filing or prior to first Office action on the merits, or prior to first Office action after filing an RCE] (no charge)
- ☐ 2. Certification Pursuant to 37 CFR 1.97(c) [before Final Office Action or Allowance] (no charge)
- ☒ 3. Fee Payment Pursuant to 37 CFR 1.97(c) [before Final Office Action or Allowance or other action closing the prosecution] (charge: \$180.00)
- ☐ 4. Certification & Fee Payment Pursuant to 37 CFR 1.97(d) [on or before issue fee payment] (charge: \$180.00)

MAIL STOP PATENT APPLICATION

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

The following are submitted in the above application in compliance with 37 CFR 1.97 and 37 CFR 1.98.

- ☒ 5. A list of documents on Form PTO-1449 or Substitute together with copies of each identified document and a translation thereof or a concise explanation of each non-English language document or a Search Report or communication from a non-US patent office or an International Search Report from an International Searching Authority for a patent application filed via the Patent Cooperation Treaty or document (s) cited in the application or the priority application.

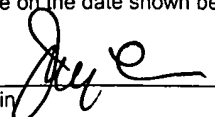
This paper is submitted in accordance with:

06/26/2006 TBESHAH1 00000023 090470 09516122

- ☐ 6. 37 CFR 1.97(b): [within three months of national, non-CPA filing or prior to first Office action on the merits or prior to the first office action after filing an RCE]

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By 
Jay L. Chaskin

Date: June 22, 2006

- ☒ 7. 37 CFR 1.97(c): [before Final Office Action or Allowance or other action closing prosecution, whichever is earlier]; and
- ☐ 8. The required Certification made in item 11 below; or
- ☒ 9. The \$180.00 fee specified in 37 CFR 1.17(p) for submission of this Information Disclosure Statement is authorized in item 14 below.
- ☐ 10. 37 CFR 1.97(d): [on or before issue fee payment]; and
- a) The required Certification is stated in item 11 below and
- b) The \$180.00 fee specified in 37 CFR 1.17(p) for submission of this Information Disclosure Statement is authorized in item 14 below.
- ☐ 11. Certification
- ☐ 12. Each item or information contained in this Statement was first cited in any Search Report or any communication from a non-US patent office or any International Search Report from an International Searching Authority for a patent application filed via the Patent Cooperation Treaty in a counterpart foreign patent application not more than three months prior to the filing of this Statement; or
- ☐ 13. No item contained in this Statement was cited in a Search Report or communication from a non-US patent office or an International Search Report from an International Searching Authority for a patent application filed via the Patent Cooperation Treaty in a counterpart foreign patent application or, to the knowledge of the person signing this document after making reasonable inquiry, was known to any individual designated in 37 CFR 1.56(c) more than three (3) months prior to the filing date of this Statement.
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- ☐ Enclosed is a check in the amount of \$_____ in payment of all applicable fees associated with the submittal of this Information Disclosure Statement.

An original and two (2) copies of this document is enclosed.

Respectfully submitted,


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Substitute for form 1449/PTO

PTO/SB/08A (08-03)

Approved for use through 07/31/2006. OMB 0651-0031

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Complete if Known

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|------------------------|--------------------|----------|
| Application Number | 09/516,122 | JUN |
| Filing Date | 03/01/2000 | |
| First Named Inventor | Boutenko | OFFICE C |
| Art Unit | 2882 | |
| Examiner Name | Porta, David P. | |
| Attorney Docket Number | 14X200060/GEM-0276 | |

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| Sheet | 2 | of | 2 |
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U. S. PATENT DOCUMENTS

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FOREIGN PATENT DOCUMENTS

| FOREIGN PATENT DOCUMENTS | | | | | | |
|--------------------------|--------------------------|---|-----------------------------------|--|---|----------------|
| Examiner Initials* | Cite No. ¹ | Foreign Patent Document | Publication Date MM-DD-YYYY | Name of Patentee or Applicant of Cited Document | Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear | T ² |
| | | Country Code ³ -Number ⁴ -Kind Code ⁵ (if known) | | | | |
| | | JP-UM-H06-038398 / | 10-05-1994 | | | |
| | | EP 0 979 5027 A ✓ | 08-29-2001 | Gen Electric | | |
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This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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